

# Pelvic Floor Muscle Activity in Different Sitting and Standing Postures: A Pilot Study

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## Aim of Study

To monitor pelvic floor tonic activity in different sitting and standing postures

## Subjects

Six (6) healthy parous females - vaginal deliveries  
Four (4) subjects experienced occasional minor episodes of incontinence associated with urgency or impact activities  
Age range 47-72 years

## Measurements

Pubococcygeal EMG activity, recorded with a vaginal surface electrode (Periform probe, Neen Healthcare, UK)  
Connected to a Neurotrac 5 EMG machine (Verity Medical, UK) - (see right)



## Procedures

Subjects performed a maximal pelvic floor contraction in both standing and unsupported sitting.  
Tonic activity was recorded in the following positions:



Slumped sitting



Supported sitting



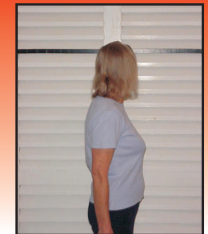
Unsupported sitting



Slumped standing



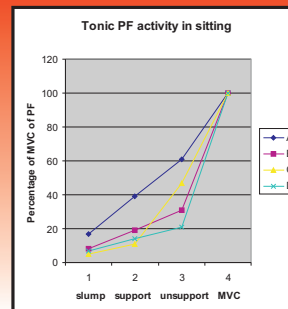
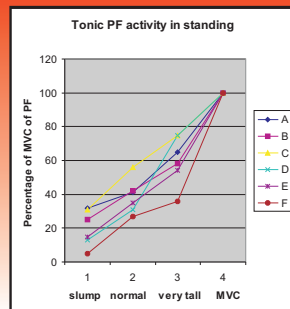
Normal standing



Very tall standing

## Results

Raw EMG signals, recorded in microvolts demonstrate an increasing level of tonic activity with increasing erectness of posture in all subjects.  
Levels of EMG activity in each position are expressed as a percentage of the maximal voluntary contraction for each individual in each posture



Pubococcygeal tonic activity in each position, expressed as a % of the MVC of pelvic floor muscles for each subject

## Conclusions

Postural position influences tonic pelvic floor activity in females - irrespective of continence status.